

## CLAIMS

1. A fluidized bed apparatus comprising a processing container, a draft tube arranged inside the processing container, and a disintegrator mechanism for dispersing agglomerates of powder particles by a mechanical disintegration force, the fluidized bed apparatus being characterized in that:

a fluidizing gas introduced from a bottom portion of the processing container causes powder particles in the processing container to form a fluidized bed in which the powder particles circulate so as to ascend through a space between an inner wall of the processing container and the draft tube and descend through an inner portion of the draft tube; and

agglomerates of the powder particles descending through the inner portion of the draft tube are dispersed by the disintegrator mechanism.

2. A fluidized bed apparatus according to Claim 1, characterized in that the disintegrator mechanism comprises an impeller having a disintegrator blade.

3. A fluidized bed apparatus according to Claim 2, characterized in that the disintegrator mechanism further comprises a screen arranged at a predetermined gap from the disintegrator blade of the impeller.

4. A fluidized bed apparatus according to Claim 1, characterized in that the disintegrator mechanism comprises a rotor and a stator each having a plurality of concentrically arranged teeth.

5. A fluidized bed apparatus according to any one of Claims 1 through 4, characterized in that the fluidized bed apparatus comprises a rotary rotor for sending the powder particles that have passed the disintegrator mechanism to an upward current of the fluidizing gas by centrifugal force.

6. A fluidized bed apparatus according to any one of Claims 1 through 5, characterized in that the fluidized bed apparatus comprises a spray nozzle for spraying a spray solution to the powder particles fluidizing and circulating in the processing container.

7. A fluidized bed apparatus according to Claim 6, characterized in that the spray nozzle is arranged such that the spray nozzle can spray the spray solution to the powder particles that have passed the disintegrator mechanism.